

Proposed Short Version of the International Classification of External Causes of Injuries (Short ICECI)

Joseph L. Annest, Ph.D.,* Chester L. Pogostin, DVM,* Judy Conn, MS,* Lois A. Fingerhut, MA,** and Donna Pickett, RRA, MPH**

*National Center for Injury Prevention and Control (NCIPC), Centers for Disease Control and Prevention (CDC), Atlanta, GA

**National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC), Hyattsville, MD

An international effort is underway to develop a new multi-axial classification system (i.e., having multiple data elements and code sets) for external cause of injury designed for use in hospital emergency departments (EDs) or similar health care settings. This new system is called the *International Classification of External Causes of Injuries* (ICECI).¹ The full version of the ICECI (full ICECI) is currently being pilot tested around the world. We are developing a companion, short version of the ICECI (short ICECI) as an alternative surveillance tool for capturing data on external cause of injury (see Figure). The short ICECI is structured with core data elements similar to the full ICECI but provides less details about the injury incident. The proposed short ICECI was developed to be compatible with the full ICECI and the *International Statistical Classification of Diseases and Related Health Problems, 10th version*² (ICD-10), external-cause-of-injury code set. Also, a crosswalk has been developed between code sets for data elements in the short ICECI and groups of codes in the full ICECI and ICD-10 systems.

The impetus for developing the short ICECI stemmed from an ICECI-Working Group meeting held in Atlanta in October, 1999 where key revisions to the first version of the full ICECI were discussed. At that meeting, Dr. Dan Pollock, medical epidemiologist and board-certified emergency physician on staff at NCIPC, proposed a new shorter code set for *injury mechanism*. This code set was derived from terms commonly used by clinicians to describe external causes of injuries in ED settings (e.g., motor vehicle crash, gunshot, stab, fall, fire/burn, poisoning). Sub-data elements with code sets were added to capture more details about the injury incident that were associated with specific mechanisms of injury. For instance, if a patient was being treated for a gunshot wound, the short ICECI has a sub-data element to record the type of firearm used. Also, a secondary data element for *injury mechanism* was added to capture other causes that are either important for injury prevention or commonly treated in hospital EDs in the United States. This list of secondary causes can be easily modified or extended to include other causes of importance in other countries.

These proposed data elements, sub-data elements, and code sets for *injury mechanism* were then combined with other data elements to form the short ICECI. These included shortened versions of data elements (e.g., *locale of injury incident*, *type of activity when injured*, *intent of injury*) in the full ICECI, *type of incident* (i.e., work-related or not), *safety equipment use* from Data Elements for Emergency Department Systems (DEEDS, 1.0),³ a text field to capture up to three *consumer products*, and a narrative field to briefly describe the *circumstances of the injury incident*. As a final step, we evaluated all of the proposed code sets of data elements and sub-data elements for compatibility with the full ICECI and the ICD-10 external-cause-of-injury code set.

We are currently planning to pilot test the short ICECI in both a national and a statewide ED-based injury surveillance system. Pilot testing will include "gold standard case-scenario" testing and field testing similar to the full ICECI pilot test now in progress. We are also developing an instruction manual, training module, and coding guidelines as part of the short ICECI package. After pilot testing, our plan is to make these materials widely available as a tool for injury surveillance in hospital ED or similar health care settings. For those with limited resources, the short ICECI may be a useful alternative multi-axial surveillance tool for use in coding external cause of injury data in emergency care settings.

References

1. WHO-Working Group for Injury Surveillance Methodology Development and its Technical Group. International Classification for External Causes of Injuries (ICECI). Guidelines for counting and classifying external causes of injuries for prevention and control. Consumer Safety Institute, WHO-Collaborating Center on Injury Surveillance, P.O. Box 75169, 1070 AD Amsterdam, the Netherlands. April 1998.
2. World Health Organization. International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Volume 1. Geneva: World Health Organization. 1992; pp. 1011-1123.
3. Pollock DA, Adams DL, Bernardo LM, et. al. Data Elements for Emergency Department Systems (DEEDS). Release 1.0. Atlanta, Georgia, USA: National Center for Injury Prevention and Control, National Centers for Disease Control and Prevention. 1997; pp. 138-139.

International Classification of External Causes of Injuries

Short Version (Short ICECI) Data Collection Form

Proposed by

**The National Center for Injury Prevention and Control (NCIPC)
Surveillance Working Group
Centers for Disease Control and Prevention (CDC)
Atlanta, Georgia**

Prepared by

J. Lee Annest, PhD (jla1@cdc.gov)
Judy Conn, MS
Chet Pogostin, DVM
Office of Statistics and Programming, NCIPC, CDC

Lois Fingerhut, MA
Donna Pickett, RRA, MPH
Collaborators and Consultants, NCHS, CDC

August 13, 1999

Figure. International Classification of External Causes of Injuries Short Version (Short ICECI) Data Collection Form

Hospital I.D. _____
 Patient I.D. _____
 Treatment Date: _____
 (MM/DD/YYYY)

Instructions: This form was designed to record information about circumstances of an injury incident for injured persons treated in an emergency department or a similar health care setting. Ideally this form could become part of the ED record for the patient. Some instructions for completing the form are given in italics. For further details about how an injury is defined and how to code each of the components given below, please see the instruction manual and coding guidelines.

Type of Incident

1. Was the injury incident work-related (i.e., occur on the job) or not? **(Check One)**
- 1 Work-related
 - 2 Not work-related
 - 9 Not recorded/unspecified

Locale of Injury Incident

2. Where did the injury occur? **(Check One)**
- 01 Home/mobile home
 - 02 Residential institution
 - 03 Farm/ranch
 - 04 Street/highway
 - 05 Trade and service area
 - 06 Industrial/construction area
 - 07 School/educational area
 - 08 Other public building
 - 09 Sports and athletic area
 - 88 Other specified
 - 99 Not recorded/unknown

Type of Activity When Injured

3. What type of activity was the patient doing at the time of injury? **(Check One)**
- 1 Sports
 - 2 Leisure
 - 3 Traveling
 - 4 Paid work
 - 5 Unpaid work
 - 6 Educational activity
 - 7 Vital activity
 - 8 Other specified
 - 9 Not recorded/unspecified

Intent of Injury

4. Did the injury result from an unintentional event or intentional act? **(Check One)**
- 1 Unintentional
 - 2 Intentionally self-inflicted
 - 3 Assault, confirmed or suspected — Injury purposely inflicted by another person
(Answer Questions 4a and 4b)
 - 4 Legal intervention — Injured by police or other authorities during law enforcement
 - 5 Operations of war and civil insurrection
 - 9 Not recorded/undetermined

If your response to Question 4. was "Assault" please answer Questions 4a. and 4b., otherwise go to Question 5.

- 4a. What was the relationship of the perpetrator to the patient? **(Check One)**
- 01 Spouse or partner (includes spouse, partner, ex-spouse, ex-partner)
 - 02 Parent
 - 03 Other relative
 - 04 Unrelated care giver
 - 05 Acquaintance or friend
 - 06 Official/legal authorities
 - 07 Multiple perpetrators
 - 08 Stranger
 - 88 Other specified persons
 - 99 Not recorded/unknown

- 4b. What was the reason for the assault?
(Check all that apply)
- 1 Altercation
 - 2 During illegal acquisition of money or property (includes completed or attempted)
 - 3 Drug-related
 - 4 Sexual assault
 - 5 Gang-related
 - 8 Other specified
 - 9 Not recorded/unknown

Figure (continue). International Classification of External Causes of Injuries Short Version (Short ICECI) Data Collection Form

Hospital I.D. _____
 Patient I.D. _____
 Treatment Date: _____
 (MM/DD/YYYY)

Mechanism of Injury

5. What was the mechanism or cause of injury?
(Check all that apply)
- 01 Motor vehicle
(Answer Questions 5.1.a. through 5.1.d.)
 - 02 Pedestrian-vehicle crash
(Answer Questions 5.1.a. and 5.1.d.)
 - 03 Motorcycle
(Answer Questions 5.1.a, 5.1.e., and 5.1.d.)
 - 04 Pedal cycle
(Answer Questions 5.1.a. and 5.1.d.)
 - 05 Struck by/against or crushed
(Answer Questions 5.1.e and 5.1.f)
 - 06 Fall
 - 07 Gunshot, firearm-related
(Answer Question 5.1.g)
 - 08 Stab/cut/pierce *(Answer Question 5.1.h)*
 - 09 Fire/burn *(Answer Question 5.1.i)*
 - 10 Smoke inhalation
 - 11 Poisoning *(Answer Question 5.1.j)*
 - 12 Near-drowning/drowning/submersion
 - 13 Foreign body
 - 14 Overexertion
 - 15 Other specified mechanism
(Answer Question 5.1.k.)
 - 16 Adverse effects of therapeutic use of drugs
 - 17 Adverse effects of surgical and medical care
 - 99 Not recorded/undetermined

If one of your responses to Question 5. was "Motor vehicle," please answer Question 5.1.b., otherwise go to Question 5.1.e.

- 5.1.b. What type of vehicle was the patient riding in?
(Check One)
- 1 Automobile
 - 2 Pickup truck or van
 - 3 Heavy transport vehicle
 - 4 Bus
 - 5 3-wheel motor vehicle
 - 6 Other specified
 - 9 Not recorded/unknown

If one of your responses to Question 5. was "Motor vehicle" or "Motorcycle," please answer Question 5.1.c., otherwise go to Question 5.1.d.

- 5.1.c. What was the patient doing in or on the motor vehicle or on the motorcycle? **(Check One)**
- 1 Driver
 - 2 Passenger
 - 3 Person boarding or alighting
 - 4 Person on outside of motor vehicle
 - 9 Not recorded/unknown

- 5a. If more than one mechanism was selected in Question 5, which one is the immediate cause of the most severe injury being treated?
(Record the number given next to the mechanism in Question 5.)

If one of your responses to Question 5. was "Motor vehicle," "Pedestrian-vehicle crash," "Motorcycle," or "Pedal cycle," please answer Questions 5.1.d., otherwise go to Question 5.1.e.

- 5.1.d. What was the counterpart to the crash? **(Check One)**
- 01 Automobile
 - 02 Pickup truck or van
 - 03 Heavy transport vehicle
 - 04 Bus
 - 05 3-wheel motor vehicle
 - 06 Motorcycle
 - 07 Railway train/vehicle
 - 08 Pedal cycle
 - 09 Pedestrian
 - 10 Animal or animal-drawn vehicle
 - 11 Fixed or stationary object
 - 12 No counterpart (rollover or overturning)
 - 88 Other specified
 - 99 Not recorded/unknown

If one of your responses to Question 5. was "Motor vehicle," "Pedestrian-vehicle crash," "Motorcycle," or "Pedal cycle," please answer Questions 5.1.a. through 5.1.d., otherwise go to Question 5.1.e.

- 5.1.a. Was the crash traffic-related or not? **(Check One)**
- 1 Traffic (occurs on a public highway/street/road)
 - 2 Nontraffic (occurs in any place other than a public highway/street/road)
 - 9 Not recorded/unknown

**Figure (continue). International Classification of External Causes of Injuries
Short Version (Short ICECI) Data Collection Form**

Hospital I.D. _____
Patient I.D. _____
Treatment Date: _____
(MM/DD/YYYY)

If one of your responses to Question 5. was "Struck by/ against or crushed," please answer Questions 5.1.e. and 5.1.f., otherwise go to Question 5.1.g.

5.1.e. What was the source of the force applied?

(Check One)

- 1 Human
- 2 Animal
- 3 Inanimate object or force
- 9 Not recorded/unknown

5.1.f. What type of force was applied? **(Check One)**

- 1 Struck by
- 2 Crushed by
- 3 Striking against
- 9 Not recorded/unknown

If one of your responses to Question 5. was "Gunshot," please answer Question 5.1.g., otherwise go to Question 5.1.h.

5.1.g. What was the type of firearm used? **(Check One)**

- 1 Handgun
- 2 Rifle
- 3 Shotgun
- 4 Larger firearm
- 9 Not recorded/unknown

If one of your responses to Question 5. was "Stab/cut/ pierce," please answer Question 5.1.h., otherwise go to Question 5.1.i.

5.1.h. What type of stabbing instrument, weapon, or object was involved? **(Check One)**

- 1 Knife
- 2 Sharp instrument/tool other than knife
- 3 Sharp glass
- 8 Other specified
- 9 Not recorded/unknown

If one of your responses to Question 5. was "Fire/burn," please answer Question 5.1.i., otherwise go to Question 5.1.j.

5.1.i. What type of burn was it? **(Check One)**

- 01 Fire/flame
- 02 Hot object
- 03 Hot liquid
- 04 Steam
- 05 Chemical
- 88 Other specified
- 99 Not recorded/unknown

If one of your responses to Question 5. was "Poisoning," please answer Question 5.1.j., otherwise go to Question 5.1.k.

5.1.j. What type of poisoning was it? **(Check One)**

- 1 Drug (excludes alcohol)
- 2 Alcohol
- 3 Chemical (includes solid, liquid, gas or vapor, excludes drugs and alcohol)
- 8 Other specified
- 9 Not recorded/unknown

Continue on Page 4 with Question 5.1.k

